400mW 10xx nm High Power Laser Diode Module

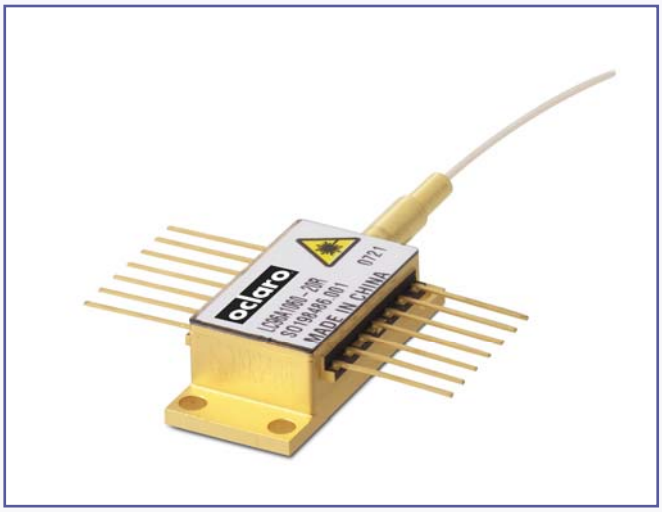
LC96A1030-20R
LC96A1060-20R
LC96A1070-20R

Features:

- High output power, up to 400mW kink free CW or 1.3W pulsed peak
- 1030nm, 1060nm or 1070nm
- Short pulse operation of 5ns-500ns
- Polarization maintaining single-mode optical fiber
- Internal thermoelectric heat pump and monitor diode
- Hermetically sealed 14-pin butterfly package
- RoHS compliant

Applications:

- Fiber lasers
- Analytical



The Oclaro LC96A10xx-20R high power laser module has been designed as a light source for pulsed fiber lasers and CW applications that require 10xx nm single mode light. Processes and techniques of coupling the fiber to the laser allow high output powers that are very stable with both time and temperature. Devices are available with kink free output powers to 400mW CW.

Characteristics

Conditions unless otherwise stated:
Case temperature -20 to +75°C
Submount temperature 25°C
Monitor diode bias -5 V
CW operation

Parameter	Min	Typ	Max	Unit
Threshold current (I_{th})	10	40	70	mA
Operating power at 750mA	350	400		mW
Operating peak power (<500ns / 500kHz)	1.0	1.3		W
Operating peak current (<500ns / 500kHz)			2	A
Forward voltage (V_f)		2	2.5	V
Peak wavelength (λ_f) • LC96A1030-20R • LC96A1060-20R • LC96A1070-20R	 1025 1055 1065	 1030 1060 1070	 1035 1065 1078	nm
Pulse width (t_{pw})	5		500	ns
Repetition rate (t_{rr})			500	kHz
Monitor detector responsivity	0.3	1.0		µA/mW
Monitor dark current			10	nA
Thermistor resistance (at 25°C)	9.5	10	10.5	kΩ
Heat pump current (ΔT = 50°C, I_f = I_f max)			1.5	A
Heat pump voltage (ΔT = 50°C, I_f = I_f max)			3.0	V

Absolute Ratings

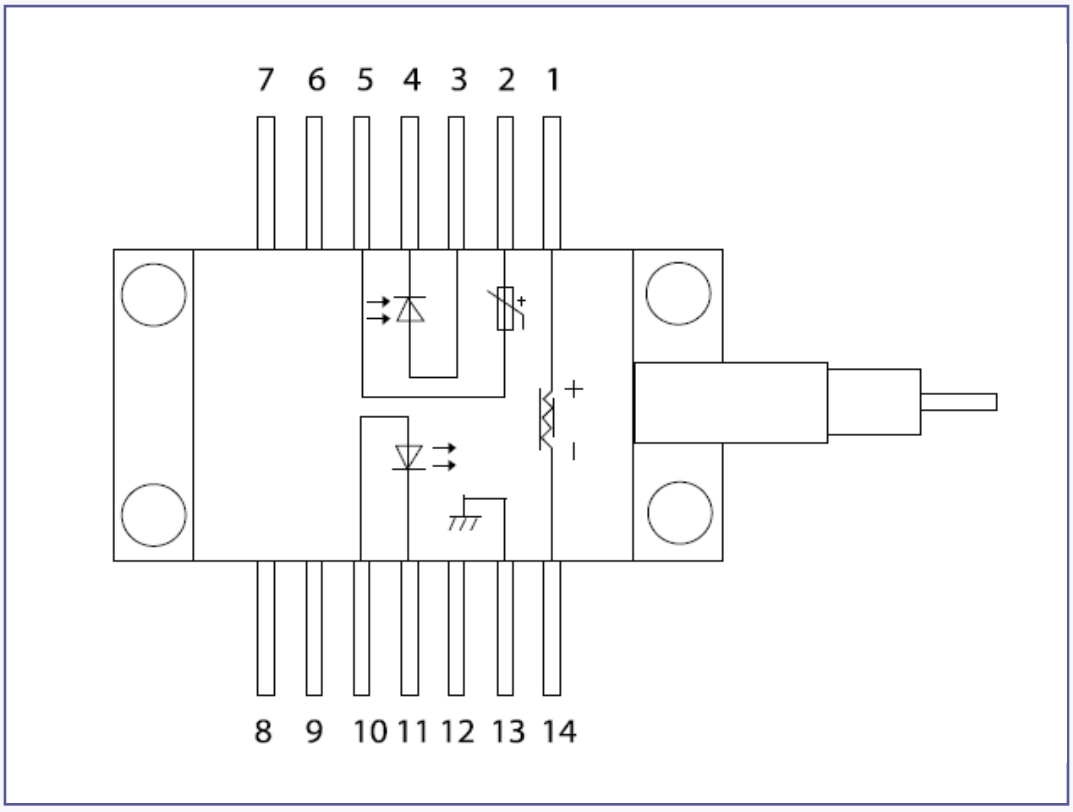
Parameter	Min	Max	Unit
Storage temperature	-40	85	°C
CW laser forward current (10s max)		1000	mA
Laser reverse voltage		2	V
Heat pump current		2.2	A
Lead soldering temperature (10s max)		260	°C
Fiber bend radius	30		mm

Fiber Characteristics

Parameter	Min	Typ	Max	Unit
Fiber type: Polarization maintaining Nufern PM980-HP or equivalent (e.g. Fujikura SM98)				
Mode field diameter	5.6	6.6	7.6	um
Buffer diameter	230	250	270	um
Fiber length (module to fiber end)	1			m
Pristine fiber proof test level	200			psi

Connections

Pin #	Description	Pin#	Description
1	Peltier cooler (+)	8	Not connected
2	Thermistor	9	Not connected
3	Monitor anode (-)	10	Laser anode (+)
4	Monitor cathode (+)	11	Laser cathode (-)
5	Thermistor	12	Not connected
6	Not connected	13	Case ground
7	Not connected	14	Peltier cooler (-)



RoHS Compliance

Oclaro is fully committed to environment protection and sustainable development and has set in place a comprehensive program for removing polluting and hazardous substances from all of its products. The relevant evidence of RoHS compliance is held as part of our controlled documentation for each of our compliant products. RoHS compliance parts are available to order, please refer to the ordering information section for further details.

Ordering Information

LC96A1030-20R	400mW 1030nm High Power Laser Diode Module
LC96A1060-20R	400mW 1060nm High Power Laser Diode Module
LC96A1070-20R	400mW 1070nm High Power Laser Diode Module

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HPL LC96A10xx-20R Rev 1.1 January 2009